

5     **We claim:**

1. A communications system for controlling the flow of a telephone call comprising:

        a Call Router Server in communication with a Database Server and an Access Code  
Server in communication with the Database Server,

10             the Call Router Server for receiving an incoming PSTN telephone call from a Public  
Switched Telephone Network (PSTN) and for routing the call in accordance with instructions  
received from the Database Server, said telephone call made by a caller over the PSTN to a  
subscriber, said Call Router Server having a Subscriber Rules Program containing instructions for  
routing incoming PSTN telephone calls to the subscriber, said Call Routing Server receiving from  
15     the caller an incoming access code signal representing an access code generated by the caller and  
transmitted over a PSTN, the Call Router Server routing the incoming PSTN telephone call as an  
outgoing telephone call based in whole or in part on the access code;

        a Database Server in communication with the Call Router Server and the Access  
Code Server for storing routing data received from the Access Code Server and for receiving an  
20     access code from the Call Router Server and generating data signals for routing the incoming  
PSTN telephone call in accordance with routing instruction corresponding to the access code; and

        an Access Code Server in communication with the Database Server, coupled to a  
public packet-switching network such as the Internet and hosting a web page accessible by the  
subscriber, said Access Code Server receiving from the subscriber one or more access codes and  
25     one or more sets of routing data corresponding to each access code for directing the routing of a  
call and generating an Access Code Preference Signal output comprising information for routing  
a call in accordance with a given access code.

2. The communications system for controlling the flow of a telephone call of Claim 1  
30     further comprising:

        the outgoing telephone call being an outgoing Internet phone call;

        the Call Router Server having a PSTN Phone to VoIP Phone Converting  
Mechanism.

35     3. The communications system of Claim 1 wherein one subscriber selected access code

5 provides a caller with restricted access to one or more PSTN telephonic peripheral from the group consisting essentially of one or more one-way pagers, one or more two-way pagers, emergency operator fallback, one or more wireless phones, call waiting, call query, one or more voice mail boxes, one or more personalized messages, and video conferencing.

10 4. The communications system of Claim 1 wherein one subscriber selected access code provides a caller with restricted access to one or more Internet telephonic peripheral from the group consisting essentially of one or more Internet one way pagers, one or more Internet two way pagers, emergency operator fallback, e-mail with voice attachment, Internet Call Waiting, Call Query, any number of Personalized messages, Internet call limits and Internet Video Conferencing.

15 5. The communication system of Claim 1 wherein one subscriber selected access code provides a caller with restricted access to one or more PSTN private lines.

20 6. The communication system of Claim 1 wherein one subscriber selected access code provides a caller with restricted access to one or more VoIP private lines.

7. The communications system of Claim 1 wherein the access code is a DTMF signal.

25 8. The communications system of Claim 1 wherein the access code is a verbal alphanumeric access code.

9. The communications system of Claim 1 wherein the access code is the caller's own voice.

30 10. The communications system of Claim 3 where the Access Code Server is programmable to allow access to telephonic peripherals for predefined periods of time.

35 11. The communications system of Claim 1 further comprising:  
the Call Router Server having a CLID Recognizing Subsystem to determine

5 the CLID of an incoming telephone call and further comprising a Subscriber Rules Program programmed to determine if the CLID recognized by the CLID Recognizing Subsystem is a CLID designated for special treatment and to determine call treatment based upon the CLID of the telephone call if the CLID is designated for special treatment;

10 the Access Code Server programmable to override access code programmed call treatment in accordance with one or more selected CLIDS; the Access Code Server sending the selected CLID call treatment to the Database Server;

the Database Server storing the CLID control data, the Database Server sending call routing data to the Call Router Server based on the special CLID of the incoming telephone call.

15 12. The communications system of Claim 11 further comprising:

the Access Code Server programmable to override CLID special treatment routing with access codes routing the Access Code Server sending the access codes that override CLID special treatment to the Database Server;

20 the Subscriber Rules Program of the Call Router Server programmed to determine if the access code sent by a caller is an access code programmed to override the special treatment of a incoming telephone call with a CLID designated for special treatment;

the Database Server sending call routing data to the Call Router server.

25 13. The communications system of Claim 1 wherein the Access Code Server is programmable by the subscriber to forward callers to an alternative permanent telephone number so as to create Virtual Number Portability.

30 14. The communications system of Claim 12 wherein the Access Code Server is further programmable by the subscriber to input the manner in which incoming telephone calls will be received by the alternative permanent telephone number.

35 15. The communications system of Claim 1 wherein the Access Code Server is further programmable by the subscriber to have certain callers be queried based on their access codes and having the query forwarded to the subscriber who may then decide the manner in which the call

5 will be treated.

16. The communications system of Claim 1 wherein the Access Code Server is further programmable by the subscriber to have certain callers be queried based on their failure to provide access codes and having the query forwarded to the subscriber who may then decide the manner in which the call will be treated.

Rule 1.126  
17  
18. A communications system for controlling the flow of a telephone call comprising:  
an Access Code Server for receiving call treatment data; said Access Code Server located on a public packet-switching network such as the Internet;  
15 a Data Base Server selectively coupled to the Access Code Server for receiving and for storing said call treatment data;  
a Call Router Server for routing incoming telephone calls to telephonic peripherals in accordance with instructions received by the from said Data Base Server;

18  
20 19. The Communication system of Claim 18 wherein the Call Router Server further comprises means for routing an incoming PSTN phone call to a VoIP phone.

19  
20. The Communication system of Claim 18 wherein the Call Router Server further comprises means for routing an incoming VoIP phone call to a PSTN phone.

20  
25 21. The Communication system of Claim 18 wherein the Call Router Server further comprises means for routing an incoming PSTN phone call to a PSTN telephonic peripheral.

21  
30 22. The Communication system of Claim 18 wherein the Call Router Server further comprises means for routing an incoming PSTN phone call to an Internet telephonic peripheral.

22  
23. The Communication system of Claim 18 wherein the Call Router Server further comprises means for routing an incoming VoIP phone call to a PSTN telephonic peripheral.

23  
35 24. The Communication system of Claim 18 wherein the Call Router Server further

comprises means for routing an incoming VoIP phone call to an Internet telephonic peripheral.

*Rule 1.126*  
*24*  
**25.** The communications system of Claim 18 wherein the Call Router Server further comprises means for providing limited access to a private line using a public line.

*25*  
**26.** The communications system of Claim 18 wherein the Call Router Server further comprises means for providing Virtual Number Portability.


*26*  
**27.** The communications system of Claim 18 wherein the Database Server further comprising means for providing Individual Virtual Number Portability.

*27*  
**28.** The communications system of Claim 18 wherein the Call Router Server further comprises means for providing CLID Routing overriding Access Code Routing.

*28*  
**29.** The communications system of Claim 28 wherein the Call Router Server further comprises means for providing Access Code Routing overriding CLID routing.

*29*  
**30.** The communications system of Claim 18 wherein the Call Router Server further comprises:

means for selecting one or more telephonic peripherals from the group consisting essentially of any combination of one or more one-way pagers, one or more two-way pager, emergency operator fallback, one or more wireless phones, one or more private lines, call waiting, call query, one or more voice mail boxes, one or more personalized messages, and video conferencing.

*30*  
**31.** A method of routing telephone calls based on an access code comprising:   
receiving a signal sent by a subscriber containing data for routing an incoming telephone calls based on access codes input by a caller over a public-packet switching network such as the Internet;

storing the call routing data on how an incoming call should be routed based on

5 access codes;  
receiving an incoming telephone call and an access code signal representing an  
access code input by a caller;  
routing the incoming telephone call based upon the access code signal and the call  
routing data..

10 <sup>31</sup>  
~~33~~. A communications system for controlling the flow of a telephone call comprising:  
a Call Router Server for receiving and controlling an incoming VoIP telephone call  
made by a caller to a subscriber over a public packet-switching network; said Call Router Server  
also for receiving an incoming access code signal representing an access code, where the access  
15 code signal is generated by the caller and transmitted over an Internet; the Call Router Server  
routing the incoming VoIP telephone call as an outgoing telephone call based in whole or in part  
on the access code; the Call Router Server having a Subscriber Rules Program containing  
instructions for routing the incoming VoIP telephone call; the Subscriber Rules Program generating  
a Call Routing and Control Information Signal which instructs the Call Router Server how to route  
20 the incoming VoIP telephone call;

a Database Server in communication with the Call Router Server for supplying call  
routing data of the subscriber to the Call Router Server;

an Access Code Server in communication with the Database Server for receiving  
access codes and information regarding call treatment based in whole or in part on the Access  
25 Codes; the Access Code Server located on a public packet-switching network and hosting a web  
page for access by the subscriber and generating an Access Code Preference Signal containing  
information as to the desired call treatment for a given access code.

30 <sup>32</sup>  
~~34~~. The communications system for controlling the flow of a telephone call of Claim 33  
further comprising:

the outgoing telephone call is an outgoing PSTN phone call;

the Call Router Server having a VoIP Phone to PSTN Phone Converting  
Mechanism.

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5       <sup>33</sup>  
35. The communications system of Claim 33 wherein one subscriber selected access code provides a caller with restricted access to one or more PSTN telephonic peripherals from the group consisting essentially of one or more one-way pagers, one or more two-way pagers, emergency operator fallback, one or more wireless phones, one or more private lines, call waiting, call query, one or more voice mail boxes, one or more personalized messages, and video conferencing.

10       <sup>34</sup>  
36. The communications system of Claim 33 wherein one subscriber selected access code provides a caller with restricted access to one or more Internet telephonic peripheral from the group consisting essentially of one or more Internet one way pagers, one or more Internet two way pagers, emergency operator fallback, e-mail with voice attachment, Internet Call Waiting, any  
15       number of VoIP private lines, Call Query, any number of Personalized messages, Internet call limits and Internet Video Conferencing.

20       <sup>35</sup>  
37. The communication system of Claim 1 wherein the PSTN incoming phone call further comprises and transfers the call to a switch using one or more of local number portability, call forwarding, or an Advanced Intelligent Network.

25       <sup>36</sup>  
38. A communications system for controlling the flow of a telephone call comprising:  
a Call Router Server in communication with a Database Server and an Access Code Server in communication with the Database Server,  
the Call Router Server for receiving an incoming PSTN and VoIP telephone calls  
and an access code generated by the caller and for routing the incoming call in accordance with  
data received from the Database Server, the Call Router Server routing the incoming telephone call  
as an outgoing PSTN or VoIP telephone call based in whole or in part on the access code; the Call  
Router Server having a Subscriber Rules Program containing instructions for routing incoming  
30       PSTN and VoIP telephone calls to the subscriber;

a Database Server in communication with the Call Router Server and the Access Code Server; the Database Server receiving an access code from the Call Router Server and generating data for the Call Router Server Subscriber Rules Program to route the incoming telephone call in accordance with routing instruction corresponding to the access code; and

35       an Access Code Server in communication with the Database Server, coupled to a

5 public packet-switching network such as the Internet and hosting a web page accessible by the subscriber, said Access Code Server receiving from the subscriber one or more access codes and one or more sets of routing information corresponding to each access code for directing the routing of a call and generating an Access Code Preference Signal output comprising information for routing a call in accordance with a given access code.

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<sup>37</sup>  
39. The communication system of Claim 38 where the PSTN incoming phone call further comprises and transfers the call to a switch using or more local number portability, call forwarding, or an Advanced Intelligent Network.

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